

**ZOOLOGICAL SERIES**  
OF  
**FIELD MUSEUM OF NATURAL HISTORY**

Volume XX

CHICAGO, OCTOBER 31, 1936

No. 18

**NOTES ON SNAKES FROM YUCATAN**

BY KARL P. SCHMIDT  
ASSISTANT CURATOR OF AMPHIBIANS AND REPTILES  
AND

E. WYLLYS ANDREWS

THE LIBRARY OF THE

NOV 16 1936

UNIVERSITY OF ILLINOIS

During a stay in Yucatan from December through June, 1934, while engaged in other duties, the junior author accumulated a small collection of reptiles and amphibians from the vicinity of Chichen Itza, amounting to thirty-seven specimens. To these were added a collection of twenty-one snakes and five lizards presented by Miss E. R. Blackburn of the Colegio Americana at Merida. Other Yucatan collections in Field Museum include nine specimens presented by Dr. George Gaumer in 1899, and three lizards collected by Dr. Charles Millspaugh in the same year. Two crocodiles and two turtles collected on Cozumel Island and two turtles from Telchac Puerto, Yucatan, were obtained by exchange from Mr. W. T. Broughman. We are indebted to Dr. Thomas Barbour and Mr. Arthur Loveridge, of the Museum of Comparative Zoology at Harvard University, for the opportunity to examine the considerable number of snakes from Chichen Itza accumulated there through the interest of Messrs. Leon J. Cole, E. H. Thompson, and Oliver Ricketson, and Drs. Joseph C. Bequaert, George Shattuck, and J. H. Sandground. A part of this material was reported upon by Barbour and Cole (1906); in the present paper have been added the scale counts for the specimens in this collection not listed by them, or subsequently received.

We are indebted to Dr. Sylvanus G. Morley, Director of the Chichen Itza Project of the Carnegie Institution, for numerous favors. Thanks are due to Mrs. Helen T. Gaige, of the Museum of Zoology of the University of Michigan, for permission to examine Yucatan collections at that institution. In the arrangement of the snakes of the genus *Leptodeira*, we have followed MS. notes by Dr. E. R. Dunn, who has a review of this genus in preparation. Thanks

are also due to Mr. Ralph Roys, of Vancouver, B.C., for correction of the Maya names collected in Yucatan. The collection has been presented to Field Museum of Natural History by the junior author.

The snakes are of especial interest because of the difficulty of identification for the layman, even as to whether they are poisonous or harmless, although the existence of a coral snake and four pit-vipers in Yucatan makes this a matter of some importance. Papers dealing specifically with the snake fauna of Yucatan are so few that we have drawn up the following notes and prepared a list of the species thus far known in the hope that they may be useful to some future visitors to Yucatan. With this hope in mind, we have added a key to the thirty-eight species thus far known from Yucatan, following in general the plan of the key to North American snakes of F. M. Blanchard.

### **Typhlops microstomus** Cope.

*Typhlops microstomus* Cope, Proc. Acad. Nat. Sci. Phila., 1866, p. 125, 1866—Yucatan.

A single specimen from Merida, Field Museum No. 19416, measuring 267 mm. in length and 3 mm. in diameter. The accompanying figure exhibits the arrangement of the head-shields.

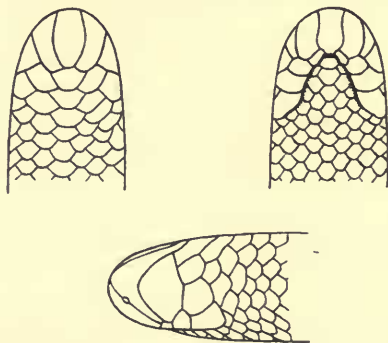


FIG. 20. Head of *Typhlops microstomus* from dorsal, ventral, and lateral aspects.  $\times 4$ .

### **Leptotyphlops albifrons** (Wagler).

*Stenostoma albifrons* Wagler, in Spix, Serp. Bras., p. 68, pl. 25, fig. 3, 1824—Brazil.

*Leptotyphlops albifrons* Stejneger, The Bahama Islands, p. 335, 1905.

Maya name: *U-kanil-beh*.

590.5  
FI  
v. 20<sup>12</sup>

Four specimens from Chichen Itza, collected May and June, 1934, Field Museum Nos. 20606 and 20616-18, were found to have about 248 scales from snout to tip of tail. The largest specimen measured 165 mm. in length and approximately 2 mm. in diameter.

**Constrictor constrictor imperator** (Daudin).

*Boa imperator* Daudin, Hist. Nat. Rept., 5, p. 150, 1803—Mexico and Central America.

*Constrictor constrictor imperator* Ihering, Rev. Mus. Paulista, 8, p. 321, 1910.

Maya name: *Och̄-can*.

A skin from Chichen Itza.

**Ninia sebae morleyi** subsp. nov.

*Type* from Chichen Itza, Yucatan. No. 20619 Field Museum of Natural History. Collected 1934 by E. Wyllys Andrews.

*Diagnosis*.—Closely allied to *Ninia sebae*, but distinguished by a higher number of ventral scales and a lower number of caudal scales.

*Description of type*.—Body short; head only slightly distinct from neck; pupil round; rostral small, about as wide as high, little visible from above; internasal suture about one-third that of the prefrontal; frontal shield-shaped, nearly as wide as long; supraoculars small, narrower in front than behind; parietals large; nasal undivided, in contact with the first and second labials; loreal elongate, entering the eye; no preocular; large prefrontal entering the eye; two post-oculars; temporals 1-2 on each side; upper labials seven, the third and fourth entering the eye on the left side, the fourth only on the right; lower labials eight, the first pair in contact behind the very small mental; anterior chin-shields much longer than the posterior; dorsal scales in nineteen rows, keeled; ventrals 149; anal entire; caudals 41.

General color (in alcoholic specimens) pale reddish brown above, lighter beneath; top of head to posterior border of parietals black; a black nuchal saddle, six scale rows in length and extending from the first scale row, separated from the parietals by a pale yellow space four scales wide, and with a narrow yellow border behind; black of head extending to the labials; chin with a black marking including the mental and first lower labials and extending backwards on the sutures between labials and chin-shields; a single very small mid-dorsal spot. Ground color in life brilliant red.

*Measurements*.—Total length 202 mm., tail 44.

5 Dec. 1936 Yenanwine

*Notes on paratypes.*—Six female specimens, Nos. 20607–8, 19419–20, 19422, and 19434, and one male, No. 19418, from Merida, obtained by exchange from Miss E. R. Blackburn of the Colegio Americana in that city, may be listed as paratypes. The male speci-

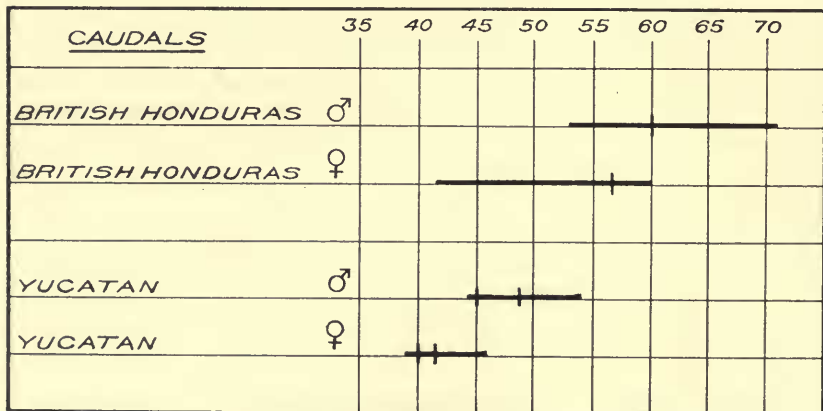
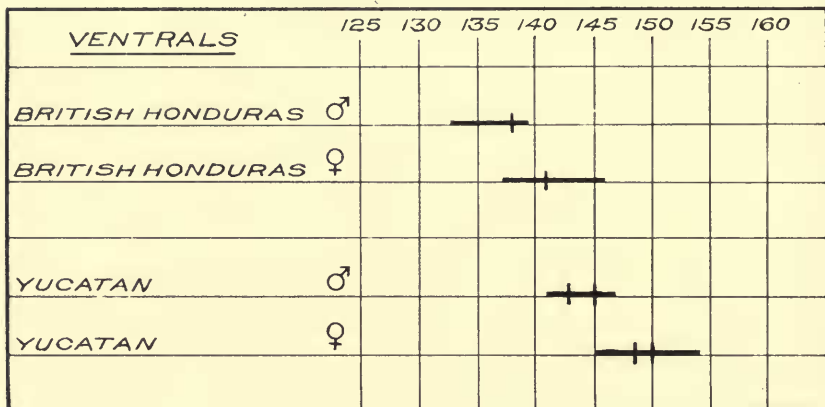


FIG. 21. Variation in ventrals and caudals in *Ninia sebae sebae* and *Ninia s. morleyi*.

men has the scale formula 19–19–19; ventrals 145; caudals 45. The head is damaged. The female specimens have the uniform scale formula 19–19–19. The ventral scales in the series range from 143 to 150, and the caudals from 39 to 41; the supralabials are uniformly 7–7, with the exception of Nos. 20607 and 20608, where they are 7–8; the infralabials are 7–7, with the exception of the same two,

in which they are 8-8; the oculars are uniformly 1-2 with the exception of No. 19419, in which the preoculars are 3-2; the temporals are 1-2 on both sides except on No. 20607, which has but one left posterior temporal; the tail-length ranges from 16 to 22 per cent of the total length, the largest specimen measuring 294 mm., tail 54 mm. On twenty-seven additional paratypes from Chichen Itza, in the Museum of Comparative Zoology, Nos. 26801-26825 and two duplicates, the following scale counts were obtained: in sixteen females, the ventrals averaged 147, with extremes of 145 and 152, while the caudals averaged 43 with extremes at 39 and 46. For eleven males, the ventrals averaged 143 with extremes at 141 and 147, and the caudals averaged 49 with extremes at 44 and 54. In other features of both scutellation and color these specimens were similar to the type. The largest female specimen measured 300 mm. in length, with a tail-length of 55.

*Remarks.*—Twenty-nine specimens from Belize and other localities in British Honduras have been available for comparison; the distinctness of this series in ventrals and caudals from the Yucatan series is shown on the accompanying graphs. A specimen in Field Museum from Xico, Vera Cruz, has 138 ventrals and 54 caudals, and thus agrees with the Belize series. The type locality of *sebae* is "Mexico," preferably restricted to Vera Cruz.

The new form is named in honor of Dr. Sylvanus G. Morley, Director of the Chichen Itza Project of the Carnegie Institution.

### ***Thamnophis sauritus proximus* (Say).**

*Coluber proximus* Say, in Long's Exp. Rocky Mts., 1, p. 187, 1823—Missouri River, above Boyer's River.

*Thamnophis sauritus proximus* Ruthven, Bull. U. S. Nat. Mus., 61, p. 98, 1898.

### ***Phrynonax poecilonotus poecilonotus* (Günther).**

*Spilotes poecilonotus* Günther, Cat. Colubrine Snakes, p. 100, 1858—Honduras and Mexico.

*Phrynonax poecilonotus poecilonotus* Amaral, Mem. Inst. Butantan, 4, p. 155, 1929; Gaige, Carnegie Inst. Wash. Publ., 457, p. 299, 1936.

### ***Spilotes pullatus mexicanus* (Laurenti).**

*Cerastes mexicanus* Laurenti, Syn., Rept., p. 83, 1768—Mexico (by implication).

*Spilotes pullatus mexicanus* Amaral, Mem. Inst. Butantan, 4, p. 282, 1929.

A single male specimen from Merida, Field Museum No. 19423. Scale rows 17-18-14; caudals 131. The head was lost.

**Drymarchon corais melanurus** (Duméril and Bibron).

*Spilotes melanurus* Duméril and Bibron, *Erpét. Gén.*, 7, 224, 1854—Mexico and Central America.

*Drymarchon corais melanurus* Stejneger and Barbour, *Check List, N. A. Rept.*, p. 85, 1917.

**Eudryas boddaertii melanolomus** (Cope).

*Masticophis melanolomus* Cope, *Proc. Acad. Nat. Sci. Phila.*, 1868, p. 105, 1868—Yucatan.

*Eudryas b. melanolomus* Stuart, *Occ. Pap. Mus. Zool. Univ. of Mich.*, 254, p. 2, 1933.

Three male specimens, Field Museum Nos. 19426 and 20627, from Merida, and Museum of Comparative Zoology, No. 26840 from Chichen Itza, and two female specimens, M.C.Z. Nos. 26839 and 26841 from Chichen Itza agree in coloration with this form as defined by Stuart. The dorsal scale formula is 17–17–15; the ventrals and caudals in males number 184 and 140, 182 and 132, and 180 and 120; in females 189, tail incomplete, and 182 and 115. The supralabials are 9–9 in all, the infralabials 10–10 in four, 11–11 in one. The preoculars are 1–1 in four, 2–2 in the fifth specimen, postoculars 2–2 except for one specimen with 2–3. The temporals are 2–2 or 2–3. The largest specimen, No. 20627, measures 1,026 mm., with the tail-length 351 mm.

**Elaphe flavirufa** (Cope).

*Coluber flavirufus* Cope, *Proc. Acad. Nat. Sci. Phila.*, 1866, p. 319, 1866—Yucatan.

*Elaphe flavirufa* Amaral, *Mem. Inst. Butantan*, 4, p. 159, 1929.

**Elaphe triaspis** (Cope).

*Coluber triaspis* Cope, *Proc. Acad. Nat. Sci. Phila.*, 1866, p. 128, 1866—Belize, British Honduras.

*Elaphe triaspis* Amaral, *Mem. Inst. Butantan*, 4, p. 159, 1929.

Eight specimens have been examined, a male specimen, Field Museum No. 7007, collected in Yucatan in 1899 by George Gaumer; two female specimens from Merida, Field Museum Nos. 19428 and 20603; a male specimen from Chichen Itza, Museum of Comparative Zoology No. 28752; and four female specimens from the same locality, Field Museum No. 20624 and Museum of Comparative Zoology Nos. 7250, 28751, and 29241. The dorsal scale formula ranges from 27–31–23 to 33–37–25; the ventrals from 255 to 271; the caudals from 73 to 104; the upper labials are 9 or 10, the infra-

labials 9 to 11; the preoculars are invariably 1-1, the postoculars 2-2 to 3-3; the temporals vary from 2-2 to 4-4. The largest specimen, No. 20624, measures 1,023 mm., the tail-length 209 mm.

No difference between the sexes is discernible in this series. The remains of a shrew, *Cryptotis mayensis* Merriam, were found in the stomach of No. 7007.

Further study, which can be made only by the accumulation of further material, is necessary to clarify the relations of this species with the last.

### **Chironius carinatus** (Linnaeus).

*Coluber carinatus* Linnaeus, Syst. Nat., ed. 10, p. 223, 1758—"In Indiis."

*Chironius carinatus* Fitzinger, Neue Class. Rept., p. 60, 1826.

### **Leptophis mexicanus** Duméril and Bibron.

*Leptophis mexicanus* Duméril and Bibron, 7, p. 536, 1854—Mexico.

A male specimen from Chichen Itza, Museum of Comparative Zoology No. 22063, has the scale formula 15-15-11; ventrals 169; caudals 180; supralabials 8-8; infralabials 10-10; preoculars 1-1; postoculars 2-2; temporals 1-2 on both sides; total length 1,286 mm.; tail-length 532 mm. Another male specimen from the same locality, Museum of Comparative Zoology No. 22064, has the same scale counts except for ventrals 173 and caudals 172, with a total length of 337 mm. and a tail-length of 141 mm.

### **Lampropeltis polyzona blanchardi** Stuart.

*Lampropeltis polyzona blanchardi* Stuart, Occ. Papers Mus. Zool. Univ. Mich., 309, p. 2, 1935—Chichen Itza, Yucatan.

Two skins from Chichen Itza are the only material available of this form.

### **Entechinus mayae** (Gaige).

*Eurypholis mayae* Gaige, Carnegie Inst. Wash. Publ., 457, p. 300, 1936—Dzitas, Yucatan.

### **Ficimia publia** Cope.

*Ficimia publia* Cope, Proc. Acad. Nat. Sci. Phila., 1866, p. 126, 1866—Yucatan.

Maya name: *Xoc-mis*.

A female specimen from Chichen Itza, collected May 11, 1934, Field Museum No. 20623, has dorsal scales 17-17-17; ventrals 148; caudals 35; supralabials 7-7; infralabials 6-6; preoculars 1-1; post-

oculars; temporals 1-2 on both sides; total length 231 mm.; and tail-length 33 mm. A second female specimen from Chichen Itza, collected May 26, 1934, No. 20635, has ventrals 151; caudals 32; supralabials 6-6; infralabials 6-6; preoculars 1-1; postoculars 2-2; temporals 1-1 on both sides; total length 264 mm.; tail-length 36 mm.

These two snakes were of a strikingly different coloration in life, the ground color of the former being a light red and that of the latter a light gray.

As this form seems to be quite distinct from *Ficimia olivacea*, we have dropped the trinomial designation, *Ficimia olivacea publia*, and returned to Cope's original binomial form.

### **Tropidodipsas sartorii** Cope.

*Tropidodipsas sartorii* Cope, Proc. Acad. Nat. Sci. Phila., 1863, p. 100, 1863  
—Mirador, Vera Cruz, Mexico.

### **Sibon sibon** (Linnaeus).

*Coluber sibon* Linnaeus, Syst. Nat., p. 222, 1758—Africa (in error).  
*Sibon sibon* Amaral, Mem. Inst. Butantan, 4, p. 194, 1929.

### **Urotheca elapoides** (Cope).

*Plioceras elapoides* Cope, Proc. Acad. Nat. Sci. Phila., 1860, p. 253, 1860—  
Jalapa, Mexico.  
*Urotheca elapoides* Boulenger, Cat. Snakes, 2, p. 182, 1894.

A single male specimen from Chichen Itza, Museum of Comparative Zoology No. 26843, has the dorsal scale formula 17-17-17; ventrals 130; caudals 98; supralabials 8-8; infralabials 9-9; preoculars 2-2; postoculars 2-2; temporals 1-1 on both sides; total length 472 mm.; tail-length 196 mm. The first preocular on each side of this specimen is very small.

### **Geophis rhodogaster** (Cope).

*Colophrys rhodogaster* Cope, Proc. Acad. Nat. Sci. Phila., 1868, p. 130, 1868  
—vicinity of Guatemala City, Guatemala; Bull. U. S. Nat. Mus., 32,  
p. 86, 1887.  
*Geophis rhodogaster* Boulenger, Cat. Snakes Brit. Mus., 2, p. 317, 1894.

The status of this species in Yucatan is not clear. It is recorded by Cope in the Schott collection.

### **Geophis multitorques yucatanensis** Barbour and Cole.

*Geophis multitorques yucatanensis* Barbour and Cole, Bull. Mus. Comp. Zool.,  
50, p. 153, 1906—Chichen Itza, Yucatan.



**Sibynomorphus brevifacies** (Cope).

*Tropidodipsas brevifacies* Cope, Proc. Acad. Nat. Sci. Phila., 1866, p. 127, 1866.

*Sibynomorphus brevifacies* Amaral, Mem. Inst. Butantan, 4, p. 196, 1929—Yucatan.

A single specimen collected at Chichen Itza, May 29, 1934, Field Museum No. 20634, has the scale formula 15-15-15; ventrals 177; caudals 81; supralabials 9-9; infralabials 11-11; preoculars 1-1; postoculars 3-3; temporals 2-3 on both sides; total length 495 mm.; tail-length 129 mm.

In life the light body-bands were bittersweet pink alternating with black, with a flame scarlet neck-band.

**Sibynomorphus sanniolus** (Cope).

*Mesopeltis sanniolus* Cope, Proc. Acad. Nat. Sci. Phila., 1866, p. 318, 1866—Yucatan.

*Sibynomorphus sanniolus* Amaral, Mem. Inst. Butantan, 4, p. 199, 1929.

A female specimen from Chichen Itza, collected March 21, 1934, Field Museum No. 20609, has the dorsal scale formula 13-15-13; ventrals 152; caudals 59; supralabials 8-8; infralabials 9-9; preoculars 2-1; postoculars 1-1; temporals 2-2 on both sides; total length 235 mm.; tail-length 52 mm. Another female specimen from the same locality, collected in May, 1934, No. 20613, has fifteen rows of scales at mid-body; ventrals 155; caudals 60; supralabials 9-9; infralabials 9-9; preoculars 1-1; postoculars 2-2; anterior temporals 2-1; posterior temporals 2-2; total length 211 mm.; tail-length 47 mm. A male specimen from Merida, No. 19424, has fifteen scale rows; ventrals 153; tail incomplete; supralabials 9-9; infralabials 9-9; preoculars 2-2; postoculars 2-2; and temporals 1-2 on both sides.

**Leptodeira annulata polysticta** Günther.

*Leptodeira annulata polysticta* Günther, Biol. Cent. Am., Rept., p. 172, 1902—"Jalapa, Oaxaca and Yucatan (Mexico), and Belize, Honduras and Panama."

Maya name; *Box-kokob*.

A female specimen from Chichen Itza, collected April 2, 1934, Field Museum No. 20620, has dorsals 19-23-17; ventrals 201; caudals 76; supralabials 8-8; infralabials 10-10; preoculars 2-2; postoculars 2-2; anterior temporals 1-1; posterior temporals 3-2; total length 603 mm.; tail-length 125 mm.

The stomach contents of this specimen consisted of the remains of *Hyla baudinii*.

**Leptodeira septentrionalis yucatanensis** Günther.

*Leptodeira septentrionalis yucatanensis* Günther, Biol. Cent. Am., Rept., p. 171, 1902—Yucatan.

Maya name: *Chac-Kokob*.

A male specimen from Chichen Itza, collected May, 1934, Field Museum No. 20604, has dorsals 19–21–15; ventrals 185; supralabials 8–8; infralabials 10–10; preoculars 1–1; postoculars 2–2; temporals 1–2 on both sides; total length 603 mm.; tail-length 143 mm. A female specimen from Yucatan, collected in 1899, No. 545, has dorsals 21–23–17; ventrals 177; caudals 57; supralabials 8–8; infralabials 10–10; preoculars 1–2; postoculars 2–2; temporals 1–2 on both sides; total length 645 mm.; tail-length 107 mm. A female specimen from Merida, No. 19421, has dorsals 19–21–15; ventrals 185; caudals 68; total length 540 mm.; tail-length 116 mm.

**Imantodes splendidus** (Günther).

*Dipsas splendida* Günther, Biol. Cent. Am., Rept., p. 176, pl. 56, fig. A, 1902—Yucatan.

A male specimen from Chichen Itza, collected June 1, 1934, Field Museum No. 20602, has the scale formula 17–17–17; ventrals 201; anal plate divided; caudals 109; supralabials 8–8; infralabials 10–10; preoculars 1–1; postoculars 2–2; anterior temporals 2–2; posterior temporals 3–2; total length 637 mm.; tail-length 181 mm.; dorsal spots 37. A female specimen from Chichen Itza, collected on the same date, No. 20601, has the scale formula 15–17–15; ventrals 198; anal plate divided; caudals 104; supralabials 7–8; infralabials 9–9; preoculars 1–1; postoculars 2–3; anterior temporals 1–2; posterior temporals 3–3; total length 691 mm.; tail-length 190 mm.; dorsal spots 39.

These two specimens agree so perfectly in coloration and general appearance with the figure of *Dipsas splendida* in the *Biologia Centrali-Americana*, and differ so sharply from the specimens of *gemmistratus* available for comparison, that the reference of *splendida* to the synonymy of *gemmistratus* by Boulenger seems open to question. The ventral scale count—223—of the unique type of *splendida* given by both Günther and Boulenger, however, falls midway between the count of 198–201 in the present specimens from Chichen Itza, and 240–254 in Yucatan *gemmistratus*. Mr. H. W. Parker of the British Museum (Natural History) replies to an inquiry for verification of the ventral count of the type as follows:

“I have had a look at the *Dipsas splendida* in question and there seems to be something wrong. The specimen preserved as the type

agrees with Günther's figure, but it has the following scale counts: Sc. 17: v. 201: A. 2: C. 97+1, complete. Its dimensions are: total length 25 in., tail 6.6 in. It also differs from the description of the genus in having only 8 anterior maxillary teeth. On the face of it, it looks as if Günther drew up his description from one specimen and had another one figured. The specimen in the British Museum is almost certainly the one which was figured and the point arises whether or not one is justified in attaching the name to the recognizable figure and specimen rather than to the inadequate description. Boulenger's counts in the catalogue must, I imagine, have been taken direct from Günther's 'Biologia' description. I have considered the possibility of an exchange of specimens, but cannot find anything to suggest that this has actually occurred."

*Imantodes splendidus* appears to be an extremely well-marked species; and since the preserved type and figure agree with new material from Yucatan, we feel justified in regarding the ventral count given by Günther as erroneous.

### **Imantodes gemmistratus** Cope.

*Himantodes gemmistratus* Cope, Proc. Acad. Nat. Sci. Phila., 1861, p. 296, 1861  
—El Salvador.

Maya name: *Katzim*.

One of these specimens, while being caught, was observed to roll itself up into a very small ball on the end of a twig, almost escaping notice. The snake did not unroll itself from this position even upon being touched.

Barbour and Cole (Bull. Mus. Comp. Zool., 50, p. 151, 1906) record a specimen of this species from Progreso with ventrals 225; this falls outside the range of variation in the present series and agrees with the fictitious scale count of *Imantodes splendidus* given by Günther and Boulenger. Re-examination of the specimen by Mr. Arthur Loveridge at the Museum of Comparative Zoology shows that it has 246 ventrals, in agreement with the Field Museum specimens.

In a male specimen, Field Museum No. 20612, collected April 1 at Chichen Itza, the scale counts are: dorsals 15-17-15; ventrals 254; caudals 159; supralabials 8-8; infralabials 11-11; preoculars 1-1; postoculars 2-2; temporals 1-2 on both sides; and the measurements are: total length 644 mm.; tail 201 mm. Three female specimens, Nos. 19417, from Merida, and 20622 and 20638 from Chichen

Itza, have the ventrals respectively 244, 240, and 248 and the caudals 146, 143, and 149. No. 20638 measures 724 mm., with a tail-length of 217 mm.

**Clelia cloelia** (Daudin).

*Coluber cloelia* Daudin, Hist. Nat. Rept., 7, p. 330, pl. 78, 1803.

*Clelia cloelia* Stejneger, Proc. U. S. Nat. Mus., 45, p. 547, 1913.

**Conophis concolor** Cope.

*Conophis concolor* Cope, Proc. Acad. Nat. Sci. Phila., 1866, p. 318, 1866—Mexico.

Maya name: *Xulub-can*.

In the single male specimen at hand, Field Museum No. 19411, from Merida, the dorsal scales are 19–19–17; the ventrals 163; the tail is incomplete; supralabials 8–8; infralabials 9–9; preoculars 1–1; postoculars 2–2; temporals 1–2 and 1–3. In five female specimens, Field Museum Nos. 20610 and 20611, from Chichen Itza, Nos. 19412 and 19413 from Merida, and Museum of Comparative Zoology No. 28748, from Chichen Itza, the dorsal scales are 19–19–17 in the Chichen Itza specimens, 17–19–15 in those from Merida; the ventrals and caudals are respectively 166 and 63, 170 and 65, 165 and 62, 157 and 55+, and 170, tail incomplete; the supralabials are uniformly 8–8, the infralabials 9–9 except in the last, which has 10–11; the oculars are uniformly 1–2 on each side; the temporals vary from 1–2 to 3–3; the largest specimen, No. 20611, measures 778 mm.; the tail 155 mm.

In the absence of evidence of intergradation between the distinctive coloration of this form and the true *lineatus*, it seems best to drop the trinomial, *Conophis lineatus concolor*. The Maya name, translated "horned snake," offers excellent evidence that the lines running along the side of the head do not continue down the body.

**Oxybelis acuminatus** (Wied).

*Coluber acuminatus* Wied, Beitr. Nat. Bras., 1, p. 322, 1825.

*Oxybelis acuminatus* Steindachner, Rept. Reise Novara, p. 72, 1867—Espírito Santo River, Brazil.

Maya name: *Xtab-čhoyil*.

One male specimen from Chichen Itza, collected April 1, 1934, Field Museum No. 20615, has dorsals 13–17–13; ventrals 181; caudals 186(?); supralabials 8–8; infralabials 10–9; preoculars 2–2; temporals 1–2 on both sides; total length 1,142 mm.; tail-length 545 mm.

Two female specimens from Chichen Itza, Museum of Comparative Zoology Nos. 26827 and 26828, agree in the scale formula 15-17-13; supralabials 8-8; infralabials 9-9; preoculars 1-1; postoculars 2-2; temporals 1-2 on both sides. The ventrals of these two specimens are respectively 198 and 192.

### **Oxybelis fulgidus** (Daudin).

*Coluber fulgidus* Daudin, Hist. Nat. Rept., 6, p. 352, pl. 80, 1803—Surinam.

*Oxybelis fulgidus* Duméril and Bibron, 7, p. 187, 1854—Surinam.

### **Coniophanes piceivittis** Cope.

*Coniophanes piceivittis* Cope, Proc. Amer. Phil. Soc., 11, p. 149, 1869—Chihuitan, Oaxaca, Mexico.

A single male specimen from Chichen Itza, collected May 30, 1934, Field Museum No. 20633, has the scale formula 23-25-19; ventrals 174; caudals 115; supralabials 8-8; infralabials 10-10; preoculars 2-2; temporals 1-2 on both sides; total length 450 mm.; tail-length 146 mm.

In a female specimen from Chichen Itza, Museum of Comparative Zoology No. 22065, the scale counts are the same except ventrals 74, and caudals 105.

These specimens differ from the original *piceivittis*, described by Cope and Bocourt, from Tehuantepec, both in respect to number of ventral and caudal scales and the width of the lateral black bands, which are extremely narrow. However, as Boulenger (1896, p. 209) records a male Yucatan specimen with 162 ventrals and 91 caudals, which counts have been verified by Mr. H. W. Parker, and as no topotypic specimens are available for comparison, we do no more than call attention to this difference.

### **Coniophanes meridanus** sp. nov.

*Type* from Merida, Yucatan. No. 19427 Field Museum of Natural History. Collected by Miss E. R. Blackburn of the Colegio Americana in Merida.

*Diagnosis*.—Allied to *Coniophanes imperialis*, but entirely lacking the sharply defined dorsolateral lines and ventral spots, and more reddish in general coloration; dorsal scale rows 17-15 instead of 19-17.

*Description of type*.—Body elongate; head somewhat flattened, distinct from neck; pupil round; rostral large, twice as wide as high, scarcely visible from above; internasal suture about one-half that of prefrontals; frontal shield one and one-half times as long as wide;

supraoculars small; parietal approximately double size of frontal; nasals divided, in contact with first labials only; loreal one and one-half times as long as high; one preocular; two postoculars; temporals 1-2 on each side; supralabials 8-7, the second and third fused on the right side, the third and fourth entering the eye on one side, fourth and fifth on the other; infralabials nine, the first pair in contact behind the mental; anterior chin-shields about equal to the posterior; dorsal scale formula 17-15-15, dropping to 15 scale rows about the fifty-fifth ventral; ventrals 132; anal plate divided.

General color (in alcoholic specimen) brownish red, top of head brown, labials yellow without punctulation, the yellow separated by a black line from the temporal brown; a yellow temporal streak from the upper corner of the eye on the parietals; a large yellow spot with narrow black edging two scales behind the parietals on each side of the neck, covering four or five dorsal scales; traces of a yellow streak on the neck behind these spots, disappearing entirely in about a head-length; dorsal color merging without dorsolateral or latero-ventral line into the yellow venter, which is entirely unspotted; lower labials, chin and gular region like belly, unspotted.

*Measurements.*—Body length (snout to anus) 313 mm. (tail incomplete).

*Remarks.*—This form appears to represent *Coniophanes imperialis* in Yucatan, although so completely distinct in dorsal scale rows and coloration that intergradation between the two forms is scarcely to be expected.

### **Tantilla canula** Cope.

*Tantilla canula* Cope, Journ. Acad. Nat. Sci. Phila., (2), 8, p. 144, 1876—Yucatan.

A female specimen from Chichen Itza, Museum of Comparative Zoology No. 31949, has the dorsal scale formula 15-15-15; ventrals 105; caudals 41; supralabials 7-7; infralabials 7-7; preoculars 1-1; postoculars 2-2; supralabials join parietals behind postoculars; total length 94 mm.; tail-length 20 mm.

### **Tantilla moesta** (Günther).

*Homalocranium moestum* Günther, Ann. Mag. Nat. Hist., (3), 12, p. 352, 1863—Department of Peten, Guatemala.

*Tantilla moesta* Cope, Proc. Acad. Nat. Sci. Phila., 1866, p. 126, 1866.

A male specimen from Merida, Field Museum No. 19406, has the scale formula 15-15-15; ventrals 138; caudals 53; supralabials

7-7; infralabials 6-6; preoculars 2-2; postoculars 2-2; temporals 1-1 on both sides; total length 106 mm.; tail-length 22 mm. In three female specimens from Merida, Nos. 19407-8, 20605, the scale formula is 15-15-15; the ventrals range from 140 to 148; the caudals from 44 to 50; the supralabials are uniformly 7-7; the infralabials 6-6; oculars 2-2 except in No. 19407, which has 1-2; the temporals are uniformly 1-1; the tail-length ranges from 18 per cent to 21 per cent of the total, the largest specimen measuring 109 mm.; tail-length 20 mm.

### ***Stenorhina degenhardtii* (Berthold).**

*Calamaria degenhardtii* Berthold, Abh. Ges. Wiss. Göttingen, 3, p. 8, pl. 1, figs. 3 and 4, 1846—Mexico and Central America.

*Stenorhina degenhardtii* Jan, Arch. Zool. Anat. Phys., 2, p. 63, 1862.

Maya name: *Sikil-can*.

In the single male specimen available, Field Museum No. 19414, from Merida, the dorsal scale formula is 17-17-17; ventrals 169; caudals 33; supralabials 7-7; infralabials 7-8; preoculars 1-1; postoculars 2-2; temporals 1-2 on each side; total length 426 mm.; tail-length 62 mm.

Two female specimens from Chichen Itza, Field Museum No. 20614 and Museum of Comparative Zoology No. 29243, and one from Merida, Field Museum No. 19415, have ventrals 173, 170, and 178, and caudals 28, 24, and 26; the upper and lower labials are 7-7, and the oculars 1-2. In No. 20614 the temporals are 1-1, in the remaining two, 1-2. The largest, No. 19415, measures 492 mm.; tail-length 51 mm.

### ***Micrurus affinis mayensis* Schmidt.**

*Micrurus affinis mayensis* Schmidt, Field Mus. Nat. Hist., Zool. Ser., 20, p. 37, 1933—Yucatan.

Three female specimens from Merida, Yucatan, collected 1934, Field Museum Nos. 20628 and 19409-10. In this series, the scale rows are uniformly 15-15-15; the ventrals range from 210 to 212; the caudals from 37 to 40, of which 6 to 16 are undivided; the supralabials are uniformly 7-7; the infralabials 7-7; the preoculars 1-1; the postoculars 2-2; and the temporals 1-2 on both sides; the tail-length ranges from 9 per cent to 11 per cent of the total, the largest specimen measuring 668 mm., tail-length 69 mm.

### ***Agkistrodon bilineatus* Günther.**

*Ancistrodon bilineatus* Günther, Ann. Mag. Nat. Hist., (3), 12, p. 364, 1863—Pacific coast of Guatemala.

Maya name: *Uol-poch*.

One female specimen from Merida, Field Museum No. 19423, has the dorsal scale formula 23-23-21; ventrals 135; caudals 57; supralabials 8-8; infralabials 10-10; preoculars 2-2; postoculars 3-3; anterior temporals 4-4; posterior temporals 4-5; total length 294 mm.; tail-length 57 mm.

### **Trimeresurus atrox** (Linnaeus).

*Coluber atrox* Linnaeus, Syst. Nat., p. 22, 1758—"Asia" (in error).

We have followed Dunn and Malcolm Smith in dropping the distinction between the American and Oriental pit-vipers of this genus.

A female specimen from Chichen Itza, Museum of Comparative Zoology No. 26834, has the scale formula 23-27-21; ventrals 209; caudals 72; supralabials 7; infralabials 10-10; total length 438 mm.; tail-length 65 mm.

### **Trimeresurus lansbergii lansbergii** (Schlegel).

*Trigonocephalus lansbergii* Schlegel, Mag. Zool., 1841, Rept., p. 1, pl. 1, 1841—Turbaco, Colombia.

Maya name: *Chac-sam*.

A female specimen, collected at Chichen Itza, Yucatan, April 2, 1934, Field Museum No. 20621, has the scale formula 21-21-21; ventrals 156; caudals 39; supralabials 10-10; infralabials 12-13; total length 523 mm.; tail-length 64 mm. A female specimen from Yucatan, collected in 1899, No. 504, has the dorsal scale formula 21-23-21; ventrals 148; caudals 41; supralabials 9-9; infralabials 10-11.

### **Crotalus terrificus durissus** Linnaeus.

*Crotalus durissus* Linnaeus, Syst. Nat., ed. 10, p. 214, 1758—America.

*Crotalus terrificus durissus* Amaral, Mem. Inst. Butantan, 4, p. 243, 1929.

Maya name: *Tzab-can*.

A female specimen from Chichen Itza, Museum of Comparative Zoology No. 7125, has the scale formula 23-23-17; ventrals 190; caudals 27; supralabials 17-18; infralabials 17-18; total length 700 mm.; tail-length 71 mm.; a male specimen from the same locality, Museum of Comparative Zoology No. 29244, has dorsals 23-27-19; ventrals 180; caudals 25; supralabials 16-16; infralabials 16-14; total length 776 mm.; tail-length 75 mm.



## KEY TO THE SNAKES OF YUCATAN

- 1.—Ventral scales larger than dorsals and elongated transversely . . . . . 3  
 Ventral scales like dorsals, not transversely elongated . . . . . 2
- 2.—Scales in 18 rows; yellowish olive color . . . . . *Typhlops microstomus*.  
 Scales in 14 rows; dark brown with white forehead, lips and end of tail.  
*Leptotyphlops albifrons*.
- 3.—No pit between eye and nostril . . . . . 4  
 Deep pit between eye and nostril<sup>1</sup> . . . . . 5



FIG. 22. Head of Fer-de-Lance, to show the facial pit characteristic of the pit-vipers.

- 4.—One or two pairs of enlarged shields on chin between lower labials; scales in less than 50 rows . . . . . 8  
 Scales on chin between lower labials small; subcaudals single; pupil vertical; dorsal scales in more than 50 rows; a claw present on each side of the vent in males . . . . . *Constrictor c. imperator*.
- 5.—Rattles on tail . . . . . *Crotalus t. durissus*.  
 No rattles on tail . . . . . 6
- 6.—The usual arrangement of nine scales on top of head . . . *Agkistrodon bilineatus*.  
 Top of head covered with numerous small scales (*Trimeresurus*) . . . . . 7
- 7.—Ventrals more than 189; hour-glass or diamond marking; belly light.  
*Trimeresurus atrox*.  
 Ventrals less than 189; banded dorsal marking, often staggered, belly dark.  
*Trimeresurus l. lansbergii*.
- 8.—No first temporal; supralabials meet parietal behind postoculars (*Geophis*) . . 9  
 First temporals present . . . . . 10
- 9.—Anal divided . . . . . *Geophis m. yucatanensis*.  
 Anal entire . . . . . *Geophis rhodogaster*.
- 10.—Chin-shields between lower labials square rather than elongated; broad black bands alternating with red or orange bands and running completely around body . . . . . *Sibynomorphus brevifacies*.  
 Chin-shields with distinct median groove and elongated rather than square . 11
- 11.—A small median scale between chin-shields and mentals; body covered with irregular black spots; approximately 60 caudals . . *Sibynomorphus sanniolus*.  
 No median scale between chin-shields and mentals . . . . . 12
- 12.—Pupils elliptic . . . . . 13  
 Pupils round . . . . . 18

<sup>1</sup> This group of snakes with a pit between the eye and the nostril, and the coral snake *Micrurus a. mayensis* are the only venomous snakes in Yucatan. All others are quite harmless.

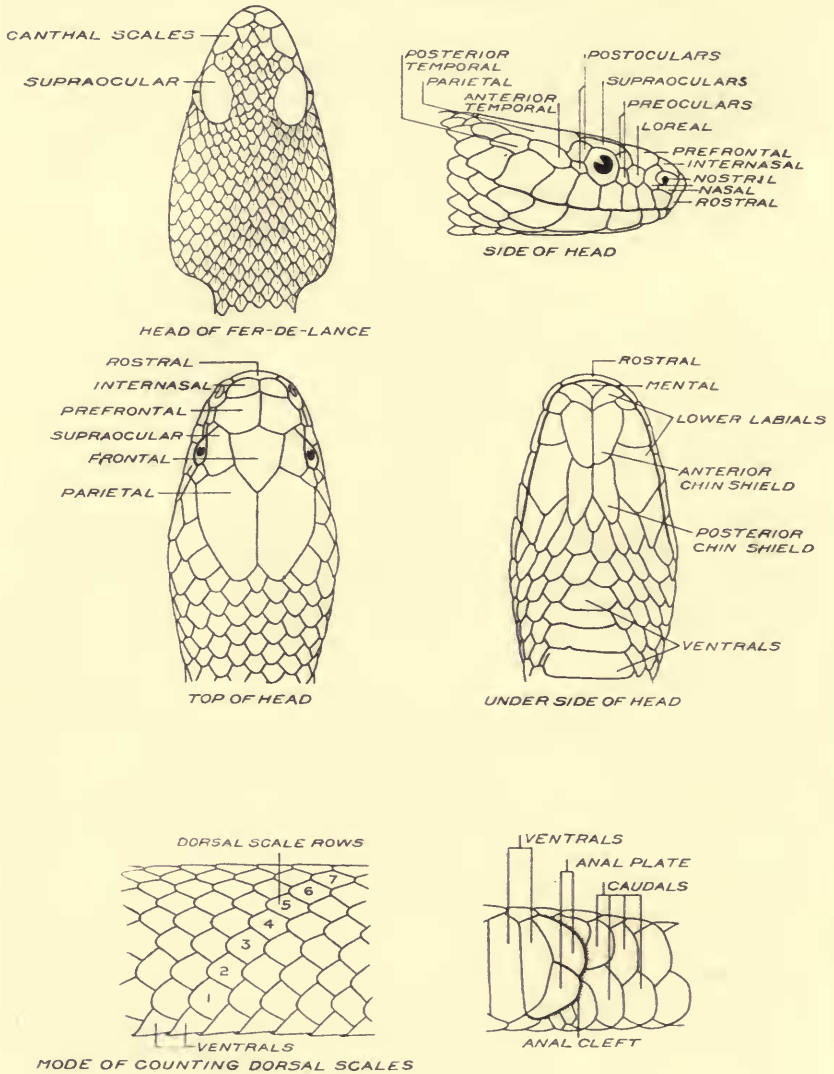


FIG. 23. Explanation of scale characters used in key, after Blanchard.

- 13.—Anal plate single . . . . . *Tropidodipsas sartorii*.  
 Anal plate double . . . . . 15
- 14.—Black with 16 to 30 red rings . . . . . *Tropidodipsas sartorii*.  
 Not ringed; mottled light and dark . . . . . *Sibon sibon*.

- 15.—Body very slender, strongly compressed; gular scales reach anterior chin-shields and separate posterior; caudals more than 90; body at middle more than three times diameter of neck (*Imantodes*)..... 16  
 Body cylindrical or moderately compressed; gular scales reach only posterior chin-shields and do not separate them; caudals more than 90; body at middle less than twice diameter of neck (*Leptodeira*)..... 17
- 16.—Red with black dorsal spots rounded laterally; caudals approximately 145; ventrals approximately 245..... *Imantodes gemmistratus*.  
 Gray with black dorsal spots extending as narrow vertical bars to ventrals or separated into dorsal and small lateral spots; caudals approximately 100; ventrals approximately 200..... *Imantodes splendidus*.
- 17.—Red with very broad bands..... *Leptodeira s. yucatanensis*.  
 Light brown with small brown spots..... *Leptodeira a. polysticta*.
- 18.—Anal plate single..... 19  
 Anal plate double..... 23
- 19.—Scarlet, with black rings enclosing yellow ones.  
*Lampropeltis polyzona blanchardi*.  
 Not so colored..... 20
- 20.—Scales, at least the median dorsals, keeled..... 21  
 Dorsal scales all smooth..... 23
- 21.—Only the median dorsal scales keeled, the laterals smooth.  
*Phrynonax p. poecilnotus*.  
 Lateral scales strongly keeled..... 22
- 22.—Three light lines running the length of the body... *Thamnophis s. proximus*.  
 No longitudinal lines; top of head and a bar on the neck black; body barred, spotted, or uniform..... *Ninia s. morleyi*.
- 23.—Anterior temporals considerably larger than posterior temporals; adult gray or blackish..... *Clelia cloelia*.  
 Anterior temporals smaller than posterior temporals..... 24
- 24.—Black with numerous oblique bands, usually yellow.... *Spilotes p. mexicanus*.  
 Uniform brown above with black markings on side of neck.  
*Drymarchon c. melanurus*.
- 25.—Snout strongly turned up at end..... *Ficimia publici*.  
 Snout not turned up at end..... 26
- 26.—Several sub-caudals entire; ringed completely around body in three colors..... *Micrurus a. mayensis*.  
 All subcaudals in pairs..... 27
- 27.—Loreal absent..... 28  
 Loreal present..... 31
- 28.—Extremely elongated head; tail-length approximately equal to body-length (*Oxybelis*)..... 29  
 Head not elongated; tail-length much less than body-length (*Tantilla*)... 30
- 29.—Gray or reddish above with black line on each side of head, passing through eye..... *Oxybelis acuminatus*.  
 Bright green above; yellowish green below; no black line on side of head.  
*Oxybelis fulgidus*.
- 30.—Ventrals less than 130; caudals less than 50..... *Tantilla canula*.  
 Ventrals more than 130; caudals more than 50..... *Tantilla moesta*.

- 31.—Rings around body in three colors; tail more than three-quarters of body length..... *Urotheca elapoides*.  
 Pattern not in complete rings..... 32
- 32.—Scales in more than 27 rows around center of body; numerous dark dorsal spots; posterior dorsal scales faintly keeled (*Elaphe*)..... 33  
 Scales in less than 27 rows around center of body..... 34
- 33.—Dorsal spots 37 to 47..... *Elaphe flavirufa*.  
 Dorsal spots 48 to 50..... *Elaphe triaspis*.
- 34.—Scales strongly keeled..... *Leptophis mexicanus*.  
 Scales not keeled..... 35
- 35.—A broad mid-dorsal black line with a narrower white line and still narrower black one on each side..... *Coniophanes piceivittis*.  
 Not as above..... 36
- 36.—A pair of very distinct yellow lines behind the eyes and a pair of larger yellow spots on each side of neck behind and above the jaws.....  
*Coniophanes meridanus*.  
 Without yellow longitudinal lines..... 37
- 37.—Scales in an even number of rows (12); ventrals 145–173. *Chironius carinatus*.  
 Scales in an odd number of rows..... 38
- 38.—Less than 50 caudals; internasal fused with anterior nasal.....  
*Stenorhina degenhardtii*.  
 More than 50 caudals; not as above..... 39
- 39.—Less than 80 caudals; brown or black line running along side of head, passing through eye and extending to neck..... *Conophis concolor*.  
 Not as above; more than 80 caudals..... 40
- 40.—Ventrals fewer than 175, upper labials 6..... *Entechinus mayae*.  
 Ventrals more than 175, upper labials 9..... *Eudryas b. melanolomus*.

## REFERENCES

- BARBOUR, THOMAS, and COLE, LEON J.  
 1906. Vertebrata from Yucatan. Reptilia; Amphibia; Pisces. Bull. Mus. Comp. Zool., 50, pp. 146–159, pls. 1–2.
- BLANCHARD, F. M.  
 1924. A Key to the Snakes of the United States, Canada and Lower California. Papers Mich. Acad. Sci., 4, pp. i–xiv + 65, 78 figs.
- BOULENGER, G. A.  
 1893–96. Catalogue of the Snakes in the British Museum (Natural History). 1–3.
- COPE, E. D.  
 1866. Fourth Contribution to the Herpetology of Tropical America. Proc. Acad. Nat. Sci. Phila., 1866, pp. 123–132.  
 1866a. Fifth Contribution to the Herpetology of Tropical America. Idem, pp. 317–323.  
 1887. Catalogue of the Batrachians and Reptiles of Central America and Mexico. Bull. U. S. Nat. Mus., 32, pp. 1–98.

GAIGE, HELEN THOMPSON

1936. Some Reptiles and Amphibians from Yucatan and Campeche, Mexico. Carnegie Inst. Wash. Publ., 457, pp. 289-304.

GÜNTHER, ALBERT C. L. G.

1885-1902. Reptilia and Batrachia, in *Biologia Centrali-Americana*, pp. i-xx+326, pls. 1-76.

IVES, J. E.

1891. Reptiles and Batrachians from Northern Yucatan and Mexico. Proc. Acad. Nat. Sci. Phila., 1891, pp. 458-463.

STUART, L. C.

1933. Studies of Neotropical Colubrinae II. Some New Species and Subspecies of *Eudryas* Fitzinger, with an Annotated List of the Forms of *Eudryas boddaertii* (Sentzen). Occ. Papers Mus. Zool. Univ. Mich., 254, pp. 1-10, 1 fig.

1934. A Contribution to the Knowledge of the Herpetological Fauna of El Peten, Guatemala. *Idem*, 292, pp. 1-8.

1935. Studies of Neotropical Colubrinae V. A New Snake of the Genus *Lampropeltis* from Yucatan. *Idem*, 309, pp. 1-6.

THE LIBRARY OF THE  
NOV 16 1936  
UNIVERSITY OF ILLINOIS